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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,390

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Lit-Hsin Loo

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EXAMINER

CLOW, LORI A

ART UNIT

PAPER NUMBER

1631

MAIL DATE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,390	<b>Applicant(s)</b> LOO ET AL.	
	<b>Examiner</b> LORI A. CLOW	<b>Art Unit</b> 1631	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 and 28-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 28-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/18/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### **Election/Restrictions**

Applicant's election without traverse of Group I, claims 1-26 and 28-53 in the reply filed on 2 July 2010 is acknowledged.

Claims 1-26 and 28-53 are examined herein. Claim 27 has been cancelled.

### **Priority**

This Application is a National Stage Application of PCT US 03/40677, filed 18 December 2003, which claims priority to US Provisional Application 60/442,878, filed 27 January 2003 and US Provisional Application 60/435,067 filed 19 December 2002. Priority is acknowledged.

### **Information Disclosure Statement**

The Information Disclosure Statement filed 18 October 2006 has been considered in full. A signed copy of PTO form 1449 is included with this Office Action.

### **Drawings**

The Drawings submitted 13 June 2005 are accepted.

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### **Claim Objections**

Claim 50 is objected to because of the following informalities: Claim 50 recites, “The method according to any one of claims 27-49”. Claim 27 has been cancelled. Therefore, claim 50 depends, in part, from a cancelled claim. Appropriate correction is required.

### **Specification**

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. Please see page 24, line 24.

### **Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 28-50 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Making reference to the *Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of Bilski v. Kappos* (75 FR 43922 at 43927 (27 July 2010)), factors that weigh against the eligibility of a process claim include no express or inherent recitation of a machine or transformation. Further, weighing against eligibility is a claim that is merely a statement of a general concept, such that it includes, for example, mathematical concepts such as algorithms, spatial relationships, geometry, etc...

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In the instant case, claims 28-50 are not patent eligible under the *Interim Guidance* because the claims merely recite mathematical concepts of analyzing data by removing noise, filtering, normalization, etc... without the recitation of a machine in which to perform such steps or without the recitation of an actual transformation of the data to a different state or thing. As such, the claims are non-statutory.

It is noted that claims 51-53 are statutory, as the factors weighing in favor of eligibility include inherent recitation of a particular machine that generates “spectra”.

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-26 and 28-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 28, and those claims that depend therefrom recite, “based on the ensemble statistics of the set of indexed data”. It is unclear as to what about the ensemble statistic the “identifying” and “removing” of portions of the set is based? The metes and bounds of “based on” are unclear. Clarification through clearer claim language is requested.

Claims 1, 22, 28, and 51, and claims dependent therefrom recite, “ensemble statistics”. However, the Specification provides no concise definition of “ensemble statistics” such that the meaning is clear. What are the statistics that define "ensemble" that are employed in the instant claims? Clarification through clearer claim language is requested.

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**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 11, 17-21, 28-36, 38, 44, 45, and 48-50 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,064,770 (Scarth et al.; Published 16 May 2000).

The instant claims are drawn to an analyzer and method for pattern classification to compress a set of data including steps of removing portions of the data, removing noise from the data, removing common characteristics from the data, and by normalizing the data.

Scarth et al. teach a method and system of identifying events in data by clustering data points into plural clusters according to data value patterns (column 3, lines 35-41; column 5, lines 1-21). In regard to claims 1, 2, 4, 21, 22, 28, 29, 31, 50, and 51, Scarth et al. teach clustering data value patterns of greatest similarity into groups with the between group dissimilarity maximized and the within group dissimilarity minimized using a clustering algorithm (column 3, lines 42-61; removing data portions/characteristics). Statistical analyses are applied to the data in order to associate statistical relevance to the clusters. Subsets of data can be selected (column 4, lines 6-31).

In regard to claims 3, and 30, Scarth et al. teach noise removal (column 4, lines 6-14).

In regard to claims 5, 6, 7, 32, 33, 34, Scarth et al. teach data normalization (column 4, lines 36-38).

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In regard to claims 8 and 35, Scarth et al. teach determination of standard deviation of data values with normalization of data (column 4, lines 6-51; column 6, lines 1-14 ).

In regard to claims 9 and 36, Scarth et al. teach data maximization (see above).

In regard to claims 11 and 38, Scarth et al teach comparison of normalization values to a baseline calculation (column 6, lines 15-22).

In regard to claims 17-20, 44, 45, 48, and 49 Scarth et al. teach decreasing cardinality by forming subsets that excludes domains of non-interest (column 5, lines 12-19).

No claims are allowed.

### **Inquiries**

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The Central Fax Center Number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori A. Clow, Ph.D., whose telephone number is (571) 272-0715. The examiner can normally be reached on Monday-Friday from 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran can be reached on (571) 272-0720.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of

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August 16, 2010

/Lori A. Clow, Ph.D./

Primary Patent Examiner

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